

# **United States Geological Survey**

National Earthquake Hazards Reduction Program

External Research Program

Proposals for Grants – Fiscal Year 2002

Program Announcement 02HQPA0001

Closing Date: May 8, 2001

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## **Changes in the External Research Program Announcement for FY2002**

### **Section II. Application Delivery Instructions**

- Rules for receipt of late proposals have been made more lenient.

### **Section III. Anticipated Funds**

- We anticipate that a total of \$6 million will be appropriated by Congress for grants in FY2002.

### **Section V. Research Priorities for Fiscal Year 2002**

- Some research Priorities are changed from FY2001; please read them carefully.

### **Section VI. Collaborative Proposals.** Please note the conditions for Collaborative Proposals.

- Please read the instruction concerning what constitutes a collaborative proposal.
- Each collaborator must submit a complete proposal.

### **Section VII. Multi-year Project Periods.**

- In FY1999 we began funding acceptable proposals for two years. We will continue that policy in FY2002. **Be sure to read the details in this section!!**

### **Section XI. Application Instructions.**

- Although not required, we urge you to preregister your proposal with the External Research Program through our Internet site (<http://erp-web.er.usgs.gov>). Preregistration provides us with critical information and will give you the reference number for your proposal if you need to contact us concerning it. Include a copy of the preregistration page with your proposal.
- Lists of previously supported projects are located on the External Research Program Web Page (<http://erp-web.er.usgs.gov>). See Section XI for information.

### **Section XIII. Evaluation of Applications.**

- The review panels will be given more flexibility in determining the ultimate ranking of the proposals.

### **Section XVII. Award Terms And Conditions**

- Special Terms and Conditions are not part of the formal announcement. These documents are pertinent only to funded proposals. You may examine these documents which are available on the External Research Program Web Page (<http://erp-web.er.usgs.gov>). See section XVI for instruction on obtaining these documents. **Please note that all reports are now required in hard copy and in digital form including all figures, photographs and maps in their original digital format.**

### **Attachment A. Research Emphasis and Priorities**

- All proposed work should indicate how the expected results can be applied to reducing losses from earthquakes in the US. This application of the proposed research should be clearly stated in a separate paragraph of the proposal, and this statement is a necessary condition for consideration of any proposal.

## ANNOUNCEMENT 02HQPA0001

### I. Application Opening date: March 1, 2001

Application Submission Closing date: 4:15p.m., local time, May 8, 2001

### II. Application Delivery Instructions

#### A. Applications delivered by mail.

1. The applicant must use the following address:

U.S. Geological Survey  
Office of Acquisition and Grants – MS 205G, Room 6A331  
12201 Sunrise Valley Drive  
Reston, VA 20192

**Note:** 20192 is the correct zip code for the USGS. Do not allow express mail companies to change the zip code.

2. Applications will be accepted by the Office of Acquisition and Grants at the address specified on this page from April 2, 2001, to 4:15pm local time on May 8, 2001. Applications not received by 4:15pm local time on May 8, 2001, at the specified address on this page, will be late and the application will be returned to the applicant. It is the responsibility of the applicant to ensure that applications are received at the place and by the time specified.

**Note:** If the applicant can show with written documentation that delivery of his proposal was delayed due to mishandling by the delivery firm, courier service, or slower than anticipated mail delivery, late receipt of the application may be considered. But, it is in the applicant's best interest to not depend on last minute mailings to meet the closing date.

#### B. Applications delivered by hand.

1. An application that is hand delivered shall be taken to the USGS, Office of Acquisition and Grants – MS 205G, Room 6A331, 12201 Sunrise Valley Drive, Reston, VA 20192.
2. The Office of Acquisition and Federal Assistance will accept hand delivered applications between 7:45a.m. and 4:15 p.m. daily, from April 2, 2001, to the closing time of 4:15pm local time, on May 8, 2001, except Saturdays, Sundays, and Federal holidays.
3. An application that is hand delivered will not be accepted by the Office of Acquisition and Grants after 4:15 p.m. on the closing date.

### III. Funds

- A. Approximately \$6.0 million will be available for support of grants in fiscal year FY2002. Of this total amount, approximately \$0.9 million is already set aside for the second year of funding for two-year grants awarded in FY2001. We estimate that the remaining \$5.1 million available will be able to fund 80 to 90 new grants. This estimate does not bind the USGS to a specified number of awards or to the amount of any award unless that amount is specified by statute or regulation. Congress has not yet authorized FY2002 funds for this program. All projects must propose start dates between November 1, 2001 and September 30, 2002.

#### **IV. Application Requirements**

- A. The majority, greater than 50%, of research activities must be conducted by the Applicant. The Applicant must retain administrative and technical control of project activities.
- B. Applications submitted by foreign organizations must be submitted in English and in U.S. dollars. Awards involving foreign governments may require additional coordination and approval by the U.S. Department of State.
- C. The Metric Conversion Act of 1975, as amended by the Omnibus Trade and Competitiveness Act of 1988 (Public Law 100-418), states a policy preference for the use of the metric system of measurements, except where the use of the system is impractical or likely to cause significant ineffectiveness in the accomplishment of Federally-funded activities. Accordingly, it is the National policy to encourage Recipients of Federally-funded grants and cooperative agreements to use the metric system of measurements in their grant related activities. Recipients and sub-recipients of Federal funds are encouraged to take similar appropriate affirmative actions to use the metric system of measurements.
- D. Proposals for geologic investigations shall be clearly oriented toward earthquake hazard assessment. The program Research Emphasis and Priorities are described in Attachment A.
- E. Proposals to fund research in foreign countries will be considered when the research will provide knowledge or new techniques transferable to a U.S. seismogenic zone.
- F. Proposals for foreign research must be based on cooperation with scientific groups in the host countries, with host country personnel being used for operational functions, and host countries providing financial support for such personnel. Proposals for cooperative efforts with agencies of foreign governments may be subject to additional approvals within the U.S. Government.

**V. Research Emphasis and Priorities:** See Attachment A.

#### **VI. Collaborative Proposals.**

Two types of collaborative proposals are acceptable: Collaboration between two or more external organizations that are seeking funding from the USGS/NEHRP External Research Program, and collaboration between an external organization seeking funding from the USGS/NEHRP External Research Program and a USGS/NEHRP internal project. Collaborative proposals between an external organization and a USGS/NEHRP project may be funded as a cooperative agreement owing to the involvement of the USGS in the work. USGS personnel are prohibited from helping an external organization prepare its proposal for competitive funding. All other proposals will be funded as grants.

External collaborative proposals are defined as work proposed by two separate institutions or organizations in which the individual organizations will accept responsibility for specific parts of the work proposed. Each PI and his/her institution will receive a separate grant and must accept financial responsibility for administering the grant. Collaborative proposals are not instances where persons from a second organization are hired as consultants or other contractual agreements to conduct work on behalf of the grantee. Questions about technical portions of a collaborative proposal should be directed to:

Dr. John D. Unger  
(703) 648-6722 (Voice)  
(703) 648-6642 (FAX)  
[junger@usgs.gov](mailto:junger@usgs.gov)

- A. A separate proposal must be submitted from each external organization involved in collaborative studies. Major sections of each proposals can be identical but each proposal must clearly define which tasks will be performed by which organization, and each institution must submit a separate budget, which clearly reflects their tasks and responsibilities.
- B. Collaborative proposals must be clearly identified in the proposal title. The application title shall read **“Proposal Title: Collaborative Research with First Institution name, and Second Institution name.”**
- C. USGS NEHRP External Research reserves the right to fund either part or all of the Applicants involved in a collaborative study.
- D. In the case of collaborative proposals involving external organizations and USGS scientists, separate proposals must be submitted to the external and internal peer review panels respectively. The internal and external components of a collaborative proposal must be severable. The USGS/ NEHRP External Research Program may fund neither, one, or both parts of the collaborative research. A letter of support from the internal USGS collaborator(s) should be attached to the external proposal.

## **VII. Multi-year Proposals**

In certain situations, the USGS considers the support of a longer-term effort to be in the best interest of the Government. During the past three years we encouraged submittal of two-year proposals. However, it has become apparent that many investigators assumed that two-year proposals are preferable to one year proposals. If the proposed work is such that two years are required to complete the research, then a two-year proposal is appropriate and applicants are strongly encouraged to write their proposals accordingly. However, work that can be completed in one year should be proposed as a one-year project. Applicants should consider their time commitments at the time of application for a grant and request the required time and funding to accomplish the project goals. Our Review Panels have frequently recommended funding only the first year of two-year proposals. They recommend this when the proposed research is easily divided into two, one-year projects or when they feel that results from the first year’s proposed work need to be shown before a second year of research is funded.

The second year funding of a two-year grant is contingent upon the availability of funds and satisfactory progress by the Recipient. Progress will be determined through written technical review of a Progress Report by the Coordinator for External Research or his or her agent. The progress report shall be submitted by the Recipient, in accordance with grant award Special Terms and Conditions (see paragraph XVI), 60 days prior to the end of the first year of funding. Additional two-year funding will be available on reapplication with a full proposal submitted for peer review. **EXAMPLE:** A proposal funded for two years beginning in the FY2000 cycle would be eligible for an additional funding in the FY2002 cycle on submission of a complete continuation proposal for peer review. Renewal of proposals funded for two years in FY2000 will be subject to all the requirements stated in the Announcement for FY2002.

## **VIII. Renewals**

Ongoing projects may be renewed by submitting a renewal proposal for competitive evaluation. The following criteria apply:

- A. Projects must have the same title and continue the same line of research supported in the previous year.
- B. The same Principal Investigator continues on the project.
- C. The proposal is submitted by the same Recipient.

## IX. Out-of-Cycle Awards

- A. Research proposals may be accepted and approved out-of-cycle (after the closing date) in cases where there is compelling circumstance or emergency (*e.g.*, seismic event) which must be acted on before the next competitive review cycle. In such an event, the USGS will solicit applications.
- B. Congressionally mandated, directed awards to support activities that evaluate Earthquake Hazards and Losses.

## X. Unsuitable Proposals

The following proposals are ineligible for consideration under this Announcement:

- A. Proposals for regional seismic monitoring or establishing Data Centers.
- B. Proposals from U.S. Government agencies or U.S. Government employees.
- C. Proposals from Federally Funded Research and Development Centers (FFRDC).
- D. Proposals in which there is a real or the appearance of a conflict of interest.
- E. Proposals involving the direct procurement of a product or service.
- F. Proposals having subcontracts for 50% or greater of total direct costs.

## XI. Projects Previously Supported by the USGS/NEHRP

Lists of currently supported projects may be obtained from the External Research Program Internet site at <http://erp-web.er.usgs.gov>

## XII. Application Preparation Instructions

Applicants shall submit one single-sided binder-clipped, signed original and one single-sided binder-clipped copy plus **9 stapled (double-sided)** copies of the application. Also submit, in addition to the application, seven stapled sets of the NEHRP Proposal Information Summary, Abstract, and Budget Summary (see XII.C., E. and F.) **The application must not exceed 25 single-spaced pages** (including figures, tables, references, appendices, curriculum vitae, etc.), and the type size shall not be smaller than 12 pitch/11 point type. All text, figures, and tables shall be on 8.5-inch by 11-inch pages. The Assurances, Certifications, and the indirect cost rate agreement shall be submitted with the original only and do not count against the 25-page total. All pages of the application shall be numbered. Do not submit copies of published papers with the application. The application shall be assembled, **precisely**, in the following order:

- A. Application for Federal Assistance, Standard Form (SF) 424.
  - 1. Use the SF 424 (Attachment B) as the cover sheet for all applications. The SF 424 must be signed by an authorized representative of the institution or company. SF 424 should only be filled out by the office of the authorized representative signing the SF 424.
  - 2. The address provided in block 5 is the address that the USGS will issue potential awards to and correspond with. In most cases, this address should be the address for the authorized representative signing the SF 424 in block 18d.
  - 3. In block 6, after completing the employer identification number, include the Dun and Bradstreet DUNS number, for the address specified in block 5. A new DUNS number can be obtained by calling Dun and Bradstreet at 1-800-333-0505. **The DUNS number must correspond to the address provided in block 5.**
  - 4. Enter the two-letter panel designation in the upper right hand block labeled "Applicant Identifier" to the left of the dash in the block.
- B. Assurances and Certifications. The authorized certifying official of the applicant shall certify Attachments C and D. **Include these forms with the original application only.**

- C. Proposal Information Summary. This summary is mandatory in all proposals and shall follow the same format as shown in Attachment F. If you registered your proposal on our Internet site you may include a printed copy of that summary page for the Proposal Information Summary.
- D. Table of contents.
- E. Abstract. The abstract shall be no longer than one, single-spaced page. It shall include identification of the problem, a summary of the approach, project objectives, anticipated results, and the implications of the project results.
- F. Proposed budget. The proposed budget shall be presented in two parts, a one page summary (with the format in Attachment E) followed by a detailed budget keyed to the summary sheet. **Place the budget summary, followed by the detailed budget, after the abstract.** Non-federal funds available to support the project may be reflected in the detailed budget or the SF 424 (line 15.b.-c.), as appropriate. The detailed budget must include the amount proposed for each of the following items in this order:
1. Salaries and wages. Identify individuals or categories of salaries and wages, estimated hours or percent of time, and the rate of compensation proposed for each person or category. Include an explanation of the amounts included for projected increases if the rate of pay shown is higher than the current rate of pay. Identify each person with a task in the project. Tuition remission and other forms of compensation paid as, or in lieu of, wages to students performing necessary work are allowable; provided that, the tuition or other payments are reasonable compensation for the work performed and are conditioned explicitly upon the performance of the work.
  2. Fringe benefits/labor overhead. Indicate the rates/amounts in conformance with normal accounting procedures. Explain what costs are covered in this category and the basis of the rate computations. Indicate whether rates are used for proposal purposes only or whether they are also fixed or provisional rates for billing purposes.
  3. Equipment. Show the cost of all special-purpose equipment necessary for achieving the objectives of the project. "Special-purpose equipment" means scientific equipment having a useful life of more than 1 year and having an acquisition cost of \$5,000 or more per item. Each item should be itemized and include a full justification and a dealer or manufacturer quote, if available. General-purpose equipment must be purchased from the applicant's operating funds. Title to non-expendable personal property shall be vested solely with the Recipient. **Under no circumstances shall property title be vested in a sub-tier recipient.**
  4. Supplies. Enter the cost for all tangible property. Include the cost of office, laboratory, computing, and field supplies separately. Provide detail on any specific item which represents a significant portion of the proposed amount. If fabrication of equipment is proposed, list parts and materials required for each and show costs separately from the other items.
  5. Services or consultants. Identify the tasks or problems for which such services would be used. List the contemplated sub-recipients by name (including consultants), the estimated amount of time required, and the quoted rate per day or hour. If known, state whether the consultant's rate is the same as she/he has received for similar services or under Government contracts or assistance awards.
  6. Radiocarbon Age Dating. Include number of samples and cost per sample.
  7. Travel. State the purpose of the trip and itemize the estimated travel costs to show the number of trips required, the destinations, the number of people traveling, the per diem rates, the cost of transportation, and any miscellaneous expenses for each trip. Calculations of other special transportation costs (such as charges for use of applicant-owned vehicles or vehicle rental costs) should also be shown.
  8. Publication costs. Show the estimated cost of publishing the results of the research, including the final report. Include costs of drafting or graphics, reproduction, page or illustration charges, and a minimum number of reprints. If not included under direct labor or other direct costs, the cost of manuscript typing shall be included.



9. Other direct costs. Itemize the different types of costs not included elsewhere; such as, shipping, telemetry, computing, equipment-use charges, age dating, or other services. Provide breakdowns showing how the cost was estimated; for example, computer time should show the type of computer, estimated time of use, and the established rates.
  10. Total direct costs. Total items 1 through 8.
  11. Indirect cost/general and administrative (G&A) cost. Show the proposed rate, cost base, and proposed amount for allowable indirect costs based on the cost principles applicable to the Applicant's organization. If the Applicant has separate rates for recovery of labor overhead and G&A costs, each charge should be shown. Explain the distinction between items included in the two cost pools. The Applicant should propose rates for evaluation purposes which they are also willing to establish as fixed or ceiling rates in any resulting award. A copy of the indirect negotiated cost agreement with the Federal Government must be included. If one is not established, a letter from a Certified Public Accountant must be included to support the cost.
  12. Amount proposed. Total items 10 and 11.
  13. Total project cost. Total Federal and non-Federal amounts, if any.
  14. Multi-year projects. The Applicant shall provide summary information (see Attachment E) as well as a detailed budget for the second year. The SF 424, however, shall reflect support for the one year only.
- G. Proposal Body: The proposal body shall consist of the following parts:
1. Significance of the project. Discuss the specific problem addressed and its importance. Include a discussion of the significant contribution the project will make to the NEHRP.
  2. Project plan. Discuss the specific hypotheses or research questions, the conceptual framework or model to be used, as well as the data collection and analysis plans, and continuing efforts. Plans should also include procedures to be used to insure objectivity and balance in the project.
  3. Final report and dissemination. The U.S. Geological Survey considers dissemination of research data and results to potential users of those results to be an integral and crucial aspect of projects funded by this program. Beyond the requirements for a final report, describe your plan for dissemination of project data and results and the planned users of those results that will result in the greatest possible benefit to earthquake hazards reduction. Describe in detail your plans for dissemination of the project results and indicate the customers to whom the project is directed.
  4. Related efforts. Describe significant, related studies conducted by members of the research team and discuss any planned coordination with other workers in the field.
  5. Project personnel and bibliography of directly related work. Provide a one-page curriculum vitae for the professional staff, summarizing education, experience, and last five years bibliographic information related to the proposed work. Curriculum vitae for post-doctoral researchers, who contribute significantly to the project, should also be included.
  6. Institutional qualifications. State the resources available at, and the relevant experience of, the institution. Resources include personnel, computer and library facilities, and ties to both sources of data and potential users of the results.
  7. Project management plan. Include the time and cost schedule for the proposed work and the time allocations and responsibilities for the project staff members. It should also schedule progress reports.
  8. Current support and pending applications. List all sources of support (in addition to the proposed effort) to which the senior research members have committed a portion of their time for the period covered by the proposal. The information should account for 100 percent of the work time of each investigator and include titles, annual budget levels, period of the awards, and the person-months committed in each case. This section must also list research being considered by, or that will be submitted to, other possible sponsors. This information will not affect the evaluation of the proposal; however, proposals submitted for funding to the Southern California Earthquake Center cannot be submitted to the USGS NEHRP External Research for funding.

9. Continuation projects. List the total amount of funding per year for which support was provided by the USGS, as well as the duration of each increment (including no-cost extensions), and the total number of person months committed by each Principal Investigator each year.

### **XIII. Evaluation of Applications**

- A. Proposals pertinent to one of the six NEHRP external program research areas will be evaluated by multi-disciplinary peer review panels. The panelists read all the proposals assigned to their panel prior to their meeting and at the panel meeting discuss each proposal according to the evaluation criteria. The panel members are scientists and engineers drawn from Federal, State, local, and regional agencies; universities; non-profit organizations; and private industry. The panels will evaluate the technical merit of the proposals especially in the context of development of an integrated program of investigations for that region with attention to the program emphasis (see Attachment A). The peer review panel's decisions on ranking of proposals is final within each panel. The panels include four regional panels; a panel for national, international and regions other than the four specified regions; and a panel for processes, theory, and laboratory proposals. Applicants shall indicate on their proposal cover sheet (SF 424) (Attachment B) which panel is most appropriate for their proposal. The panel designation shall be entered in the upper right hand block labeled "Applicant Identifier". The USGS will revise panel assignments as necessary.

The panels and their designations are as follows:

<b>Designation</b>	<b>Panel Name</b>
SC	Southern California Region
NC	Northern California Region
PN	Pacific Northwest Region
CU	Central United States Region
NI	National, International, and Other Regions
PT	Processes, Theory, and Laboratory

**Note:** Do not submit the same or a similar proposal to more than one panel.

- B. All proposals are considered in accordance with the criteria set forth below:
1. Relevance and timeliness. This factor considers the relevance and timeliness of the proposed research activities as they relate to the NEHRP program goals, including regional emphasis where appropriate (see Attachment A).
  2. Technical quality of the proposal. This factor considers the scientific merit of the proposed approach and the probability of achieving positive results within the designated period.
  3. Competence and Recent research performance of Principal Investigator(s) and research team. This factor considers experience and competence of the PI and coworkers; and promptness with which the research results were disseminated to the scientific community from previous funding. This factor includes performance records and capability to provide the necessary facilities and support that will insure satisfactory completion of the proposed work. The recent performance aspect is primarily concerned with the timely publication of project results and data in peer-reviewed scientific or technical journals, the impact of the report, and whether reporting requirements from previous USGS awards have been satisfied.
  4. Appropriateness and reasonableness of the budget. This factor considers whether the proposed budget is commensurate with the level of effort needed to accomplish the project objectives and whether the cost of the project is reasonable relative to the value of the anticipated results.

- C. The assembled panels make recommendations and provide advice by ranking proposals into priority groupings, funding levels, and the length of the project. Panels include USGS personnel; where necessary, to provide coordination with internal USGS/ NEHRP elements. The results of the review will assist the USGS in making final award determinations under this Announcement.

#### **XIV. Rejection of Applications After Initial Review**

If a proposal does not meet all requirements specified in the Announcement, as determined by the Contracting Officer in consultation with the Project Officer, the proposal will be promptly returned to the applicant indicating the reason for its return.

#### **XV. Involvement of Federal Employees**

Federal employees including USGS employees are prohibited from serving in any capacity (paid or unpaid) on any application submitted under this Announcement. Proposals, which have a real or apparent conflict of interest, will not be processed for evaluation. This does not prohibit cooperation or collaboration between USGS and non-USGS scientists in information exchange and data collection. (See paragraph VI.)

#### **XVI. Award Terms and Conditions**

Award Recipients must comply with grant award Special Terms and Conditions and General Provisions. The FY2002 Special Terms and Conditions and General Provisions may be obtained through the External Research Program Internet site (<http://erp-web.er.usgs.gov>).

- A. No-cost Extensions to the Project Period: No-cost extensions are discouraged. The Earthquake Hazards Program (EHP) awards grants and cooperative agreements for research that extends or supplements the ongoing research within the Geological Survey. The timely conduct of funded projects is of great importance to the achievement of the goals of the EHP. Applicants should consider their time commitments at the time of applying for a grant. Requests for no-cost extensions will be considered on a case-by-case basis. Applicants should supply documentation supporting their request for an extension.
- B. Supplementary Funds: Supplements to the amount awarded are also discouraged. The peer review panels recommend funding at a rate commensurate with their judgment of the scientific merit of a proposal and their expert knowledge of the expenses likely to be incurred in the conduct of the research. The EHP is aware that the course of any research cannot always be predicted. However the bulk of the funds available in this program are expended early in the fiscal year and little is retained for expenses beyond emergencies or special opportunities. Requests for supplementary funds will be considered on a case-by-case basis. Applicants should supply documentation supporting their request for supplementary funding.